

THE **Systems**
Group INC.

Systems Experts Working for You.

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The Systems Group is a data processing services company offering comprehensive data processing support. Our carefully selected, experienced consultants are experts — experts working for *you*.

Once you have contracted for systems support from The Systems Group, you've hired professionals who will perform no differently than your most dedicated in-house employees. Your business goals become our business goals. Your success, ours as well.

By careful appraisal of your data processing software and hardware needs, we can provide immediate resources necessary to help your business gain and grow.

And, since our primary business is providing consulting services, you can rely on us to assist you *whenever* the need arises.

The Systems Group Can Support You In All Of The Following Areas:

Application Support — Business-Specific Answers

Consulting services are provided for software application support in mainframe, minicomputer, and microcomputer environments. Your business-specific programming requirements will be met by individuals with a working knowledge of your particular enterprise and with an understanding of the functionality implicit in your application software needs.

Systems Support — Efficiency Plus

The Systems Group maintains a staff of consultants dedicated exclusively to systems support. This assistance is available for the installation and ongoing maintenance of any, or all, of your systems software. Special attention is devoted to system performance levels, efficiencies in code, and all other aspects of system fine-tuning. Our consultants bring not only requisite background skills but, more importantly, a perceptive reasoning power essential for the understanding — and mastering of — complex computer operating environments.

Management Support — Another Alternative

A service alternative generally selected by larger companies, Management Support offers options for managing data processing services for an *entire* business area. Product-specific and at a fixed cost, this service assists companies that are unable or unwilling (either from a profit standpoint or due to limited resources) to pursue in-house staffing and management of a particular project.

Technical Writing — Completes the Communication

The Systems Group offers a wide range of technical writing services. Our highly experienced staff writes software and hardware manuals, self-paced training materials (including Computer Based Training), and internal publications such as job descriptions, policies and procedures, and newsletters. Our staff can also analyze your present documentation and show you how to make it more responsive to your organizations needs.

Education — A Knowledge Investment

Specializing in relational database technologies and DEC VAX products, the education and training offered by The Systems Group can be tailored to your specific needs. Classes are offered either at your site or on a consortium basis. Shared-cost arrangements, accelerated training periods, and flexible meeting times are all part of the way we help ensure the availability of this vital tool.

For more information on how our systems experts can work for *you*, call (203) 633-0359.

Glastonbury, CT 06033 (203) 633-0359

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Instructor Biographies

Jonathan S. Sayles

Jonathan Sayles is a nationally recognized authority on Relational Database, Data Communications and C.A.S.E. technology with over sixteen years of experience in systems development and design, database design, and training. His specific areas of expertise include DB2, Oracle, IMS DB/DC, and SQL.

Mr. Sayles has worked on database and data communications software projects for many corporations including, United Technologies, The Travelers, ITT, Sage Software Inc., and Blue Cross/Blue Shield. He has authored four relational database books, twelve courses on relational subjects, and writes a monthly column for a national database publication on SQL, relational database design and other topics. Mr. Sayles has also had articles published in Computerworld, Explain magazine, Data Base Programming and Design, lectured widely on topics such as DB2 and C.A.S.E. and developed a computer-based training self-study course on SQL.

Mr. Sayles regularly conducts seminars and workshops on such topics as DB2 Performance and Tuning, IMS DB/DC and MFS, SQL, Oracle, Relational database design and administration, and other relational technology. He earned his BS degree from the University of Hartford in 1974, and his MS degree from the University of Bridgeport in 1978.

Company Profile

Background

The Systems Group, Inc. is a Connecticut corporation offering comprehensive data processing support in four areas:

- *Application Support*
- *Education Services*
- *Systems Support*
- *Documentation Services*

The company employs data processing professionals whose skills range from simple COBOL applications knowledge through the complexities of operating system internals. These professionals support The Systems Group's clients throughout the country. We are proud to include the following companies as part of our client listing:

Aetna Life and Casualty
Bachman Systems
BMC Software
CIGNA
Citibank
EDS
Farmer's Insurance
Fleet Bank
ITT-Hartford Insurance Group
Morgan Guarantee Trust Co.
Pratt & Whitney Aircraft
Sikorsky Aircraft
Southern New England Telephone Co.
Tennessee Valley Authority
Textron Lycoming
Travelers Insurance Company
USF&G
United Technologies Corporation
Warner Lambert
Westinghouse Broadcasting

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Company Profile

Instructors

Our instructors have been hand-picked by our Director of Educational Services. They are consultant specialists (many are *published authors*) in fields related to the courses they teach. This means *each instructor has recent hands-on experience with the material being taught* as well as the day-to-day problems which arise in the work environment; it also allows them to empathize and be patient with each question and with each student.

Courseware

Our courseware is current and geared for real-world programming situations and production work.

Student manuals and handouts include:

- *Detailed Table of Contents*
- *Graphics and Explanations of All Topics*
- *Workshops and Exercises*

Overhead transparencies corresponding to the student material are used in all of our classes to visually reinforce and supplement the course's handout material. Customized and installed workshops are available upon request.

Course Structure

Our courses are developed around the active use of *practical workshops and carefully-graduated exercises*, building expertise and unconscious performance. They encourage and nurture an intuitive approach, thus producing the ability to THINK in the subject or language.

A clear comprehension of each topic is unfolded to the student through explicit graphics, guided simulations and instructor-led walk-throughs. The student's ability is focused to clearly visualize abstract material and the internal processes, functions and relationships of a package - the important step towards mastery. Giving our students this visual "*big-picture*" approach towards learning a new language, skill, or product, fosters and/or improves existing abilities and fills in conceptual gaps.

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Company Profile

Reference documentation and the knowledge and functional use of any Education Division

HELP facilities built into the software are discussed and reinforced in the classes and workshops. This process develops student confidence and skill in independent problem solving.

All of the program examples in the handouts, workshops and exercises are coded using structured techniques in a maintainable, easily-modified style. This coding approach produces quality application code that is easily understood, tested/verified and maintained.

This is the philosophy under which our education is developed. The Systems Group stands behind the classes we teach, the instructors we provide, and the courseware we sell or lease.

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Considerations

The Systems Group Commitment

The Systems Group will provide all course material, including:

- *Student Handouts*
- *Overhead Transparencies*
- *Customized and Installed Workshops*
- *Workshop Solutions*

The Systems Group also provides "*post training, technical consulting services*" to our clients. Should students run into real-life problems after a class, we are ready to help answer questions, discuss problems and clarify issues.

Your Commitment

As part of your commitment, we expect you to provide the following:

- *Use of classroom facilities and terminals for the course presentation for up to 18 students*
- *Pre-class machine time to install the workshops*
- *Pre-class discussion regarding audience-level and directions on customizing the material, if requested*

Other Services

In addition, The Systems Group offers a *Train-The-Trainer* program. Please contact us for details on this alternative.

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Listen To What The Critics Are Saying:

"Absolutely **EXCELLENT** instructor: **In-depth knowledge** of DB2 itself! Great feel for the industry's use of it! He provided knowledge, perspective, history and foreseeable future of DB2. This was a **great class**, the best I ever had."

*George Madden, Reliance Corporation
10 + years in Data Processing*

"Excellent class. He made DB2 very interesting . . . He gave DB2 a **personality**."

*Carol Wurmnest, Connecticut Bank and Trust
8 + years in Data Processing*

"The instructor was one of the best I've had so far. His knowledge of [Micro Focus COBOL/2 Workbench] and his communication of the subject matter were very good."

*George Hepple, United Technologies
19 + years in Data Processing*

"Good, easy style and knowledgeable instructor... I always got help when I asked for it."

*Stephen B. Fields, CIGNA
18 + years in Data Processing*

"The course content ranged from very simple and understandable instructions to in-depth views of VMS components. The instructor was very good; he had **very good knowledge and experience** with VMS, gave students **individual attention**, did extra research to get answers for students with special interest, and was patient about **answering every question**, no matter how simple or complex."

*Greg Belshaw, Lane County Public Works
18 + years in Data Processing*

"[The instructor] was well-prepared and extremely knowledgeable of the ORACLE and VAX/VMS systems. Very willing to spend time with different, difficult concepts even if it meant out-of-class time. A very friendly person [who] looks like he enjoys teaching."

*James D. Aaas, McClellan Air Force Base
12 + years in Data Processing*

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PARTIAL REFERENCE LISTING

AETNA

Mr. Rory Murchinson
Aetna Life & Casualty
151 Farmington Ave., Mail Stop-SA24
Hartford, CT 06156
(203)727-4474

AVON

Ms. Marie Young
Avon Products
One Avon Plaza
Rye, NY 10581
(914)935-2513

DEAN WITTER REYNOLDS, INC.

Ms. Chris Rennie
Dean Witter Reynolds, Inc.
2 World Trade Center
New York, NY 10048
(212)392-5660

CUNA MUTUAL

Ms. Bonnie O'Flanagan
ISD Training and Education
Cuna Mutual Insurance Group
5910 Mineral Point Road, 4G9
Madison, WI 53701
(608)238-5851x3637

UNUM INSURANCE

Ms. Tina A. Weden
Training Administrator
UNUM Insurance
Distributed Systems Services
2211 Congress Street
Portland, ME 04122
(207)770-2774

MORGAN GUARANTY

Ann Marche
Morgan Guaranty Trust Company
23 Wall Street, 21/20P
New York, NY 10015
(212)504-5834

PRATT & WHITNEY

Mr. Rich LoBrutto
Management Information Systems
Pratt & Whitney Aircraft
400 Main Street, MS183-08
East Hartford, CT 06108
(203)565-4030

SIKORSKY

Ms. Sue Gaieski
Sikorsky Aircraft
6900 Main Street
Stratford, CT 06601
(203)386-7105

TRAVELERS

Mr. Dan Henry
Travelers
One Tower Square
Hartford, CT 06183
(230)277-6406

HYDRO-QUEBEC

Mr. Benoit Tetreault
HYDRO-Quebec
1111 Street Charles West
2nd Floor
Longueuil, Quebec
(514)442-4923

Course Code	Course Description	Duration	Price
CASE Technology			
APS.200	APS Batch Programming This course will enable an applications programmer or technical person to be able to use the APS product in batch mode. Specifically, it teaches the APS Application Painter facility (formerly known as S-COBOL). After completing this course, programmers will be able to write, compile, test and debug APS S-COBOL (BATCH) programs.	4 Days	\$6,800
OBJ.100	Object-Oriented Programming The student will be introduced to the concepts and vocabulary of the object-oriented paradigm, and the fundamental concepts behind object-oriented systems. Object-oriented programming languages and database management systems are presented as potential solutions to problems associated with traditional technology.	2 Days	\$3,400
OBJ.200	Object Oriented Design This four-day course provides a comprehensive overview of object-oriented analysis and design. Object-oriented analysis and design is based on a "data driven" methodology. Traditional structured methodologies primarily focus on processes by formulating data flow diagrams and then, secondarily consider what data is necessary to support the processes. An object-oriented methodology takes the opposite approach. It first considers the data, really the objects described by the data, and then considers processes pertinent to the behavior of the objects. The benefits of this methodology will be described in the course.	4 Days	\$7,200
DB2			
DB2.100	DB2 Concepts and Facilities Participants will acquire a basic understanding of IBM's DB2 RDMS and the SQL programming language. Emphasis is placed on the capabilities of DB2, the differences between DB2 and other databases and its use in business applications.	1 Day	\$1,600
DB2.200/300	DB2 Application Programming This course is designed to train a COBOL Application Programmer in DB2 application programming, SQL statement coding, testing, verification and SQL statement performance and tuning. Emphasis is placed on learning through hands-on machine work-shops, exercises and explicit examples of relational DB2 coding features, problems and considerations.	5 Days	\$8,000
DB2.600S	DB2 Application Design and Tuning This course is designed to train a DB2 System and Application Designer, Developer or Administrator in techniques and approaches to designing and tuning a high-performance DB2 application system. Emphasis is placed on a practical, step-by-step approach to applying "state-of-the-art" DB2 Table design efficiency guidelines, SQL coding efficiency guidelines, and DB2 application performance analysis and tuning mechanisms. Practical workshops demonstrate the impact of alternative choices for tuning parameters.	5 Days	\$8,000
DB2.400	Advanced Topics for DB2 Application Developers After successfully completing this course, students will be able to analyze, code and implement advanced SQL statements. They will also be able to optimize DB2 application programs containing SQL statements based on DB2 Version 2 internal processing and data access strategies.	2 Days	\$3,600
DB2.500C	DB2 Database Design and Administration This class covers concepts, tools, utilities and commands necessary to design, implement and administrate efficient DB2 databases. At the completion of the course, students will be able to make judgements regarding logical and physical design alternatives, data security, data integrity, and performance trade-offs. This class is a hands-on class with students spending approximately 50% of the time in exercises.	5 Days	\$8,500
DB2.550	Data Modeling and DB2 Logical Database Design The student will be exposed to the disciplines and techniques of contemporary DB2 database design methods.	3 Days	\$4,950
DB2.700	DB2/CICS Interface Successful completion will enable the student to code SQL statements in CICS Command Level programs, prepare CICS-DB2 programs for execution, and test and debug the CICS-DB2 program. Students will be made aware of the effects of DB2 locking on CICS tasks, the CICS Attach Facility, and the handling of both CICS and DB2 error conditions.	1 Day	\$1,850

Course Code	Course Description	Duration	Price
QMF			
QMF.100	QMF for End-Users This course provides participants with all the important QMF programming constructs needed by business professionals to create reports and access data stored on relational databases.	2 Days	\$3,200
QMF.200	QMF Advanced Features This course is designed to train a QMF End-User or Application Developer in advanced data extract and report-writing techniques available with QMF version 2.3 or better. Emphasis is placed on hands-on exercises with approximately 60% of class time spent working in QMF. Practical guidelines for QMF object administration, PF-Key customization, advanced SQL and detailed report generation are addressed.	2 Days	\$3,200

Workstation Courses

MFCOB.300	Micro Focus COBOL/2 Workbench The student will learn how to use the Micro Focus COBOL/2 PC-emulation product to develop, maintain and test mainframe COBOL programs on the IBM PC.	3 Days	\$4,350
CICS.300PC	CICSVS86 Workshop The student will learn how to use the CICSVS86 PC-emulation product to develop, maintain and test mainframe CICS programs on the IBM PC. (The student will be able to implement IMS databases on the PC, if IMSVS86 is installed.)	1 Day	\$1,450
IMS.300PC	IMSVS86 Workshop The student will learn how to use the IMSVS86 PC-emulation product to develop, maintain and test mainframe IMS programs on the IBM PC. The student will also be able to implement IMS databases on the PC.	1 Day	\$1,450
XDB.300	XDB-DB2 Workshop After completing this one-day XDB Workbench course, students will be able to prepare, check, and animate Micro Focus COBOL programs using XDB RDBMS to access relational databases. The students will also be able to discuss and use the SQL and application development features and facilities of XDB to prototype applications, load XDB tables with data transferred from mainframe DB2, and customize XDB sessions.	1 Day	\$1,450

OS/2

OS2.100	OS/2 Overview for Application and Technical Personnel Participants will be exposed to: Origins and purpose of OS/2; similarities with and differences from DOS; components of OS/2; programming languages and tools available for application development; sharing of relational data with mainframe relational database management systems; advantages of using a graphical interface such as OS/2 Presentation manager.	1 Day	\$1,700
OS2.200	Using OS/2 Successful completion will allow the student to: Be aware of the origins and purposes of OS/2; compare OS/2 with DOS; be familiar with the components of OS/2; manipulate windows (Minimize, Maximize, Close, Scroll, get Help); add a task group to the Presentation Manager; perform multiple tasks concurrently; run applications in DOS; print files; use the Presentation Manager, Print Manager, System Editor.	1 Day	\$1,700
OS2.400	Programming the OS/2 Presentation Manager The student will learn to compile, link, and debug PM programs, create windows, manipulate a cursor, handle mouse and keyboard interaction, incorporate pop-up, pull-down, buttons, shortcut keys, and HELP keys.	5 Days	\$8,000
OS2DBM.300	OS/2 Database Manager Application Development The student will learn to write SQL SELECT, UPDATE, INSERT, and DELETE against tables; use Query Manager to run queries and format output; embed SQL in applications; precompile, bind, compile, and link an application.	5 Days	\$8,000
OS2.300	OS/2 Programming Fundamentals Students will create, compile, link, test, and debug programs making use of OS/2 features; use OS/2 at a basic level; gain a basic understanding of the architecture of 286 and 386 chips.	5 Days	\$8,000

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Course List

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MVS			
COB.100	Introduction to COBOL Programming	5 Days	\$7,250
COB.200	Advanced COBOL Programming	3 Days	\$4,350
COB2.500	OS/VS - VS COBOL II/ Differences A course which defines the Methods and Advantages of upgrading from OS/VS COBOL to VS COBOL II. This course covers reasons why VS COBOL II should be used. It examines what has been eliminated from OS/VS COBOL. Compiling, Linking and Executing VS COBOL II Programs will be covered. There will be a discussion of the New Language Elements of VS COBOL II and also The Interactive Debugger (COBTEST).	1 Day	\$1,450
COB2.550	VS COBOL II Workshop A workshop covering the Methods and Advantages of upgrading from OS/VS COBOL to VS COBOL II. This course covers all the topics of COB2.500, but concentrates on Structured Programming Language elements like: ENDIF, EVALUATE/CASE, new PERFORM, and inline PERFORM. The course also explains what has changed and what behaves differently, such as Table Processing and INSPECT.	2 Days	\$2,900
VSAM.100	VSAM Overview This course is intended to describe three different types of VSAM datasets, the uses of one type of VSAM dataset versus the others, the overall process of Control Interval and Control Area splits, the general control information stored in VSAM records, and the VSAM and ICF catalog structure.	1 Day	\$1,450
VSAM.200	VSAM File Creation and Maintenance This course is intended to describe how to create and maintain VSAM datasets, as well as how data is stored and managed within ESDS and KSDS datasets.	3 Days	\$4,350
VSAM.300	VSAM COBOL Programming The student will learn how to code and implement application programs using sequential access to ESDS and KSDS datasets, and code AMS commands and JCL to create VSAM datasets.	4 Days	\$5,800
TSO.100	TSO/ISPF for Programmers This workshop will give participants a thorough, working knowledge of TSO/ISPF commands, concepts, features and facilities. Through interactive workshops, students will learn to accomplish standard application programming tasks using TSO/ISPF. Emphasis is placed on the practical, applied use of native TSO commands, the ISPF Edit and ISPF Library Management Facilities, and other ISPF menus and features as required. Additional topics that may be added to extend this three-day course include: An Introduction to TSO CLISTS; the TESTCOB Facility; and Overview of DB2 Interactive (DB2I).	3 Days	\$4,350
TSO.200	TSO Command Procedures (CLISTS) This course is designed to teach programmers and other technical personnel how to use CLIST programming techniques. This course is a hands-on learning experience with over 50% of the students' time spent in exercises.	3 Days	\$4,350
TSO.400	TSO - Programming in REXX This course is designed to train an application developer in the use of IBM's REXX command language running under TSO. Emphasis is placed on coding techniques, performance principles, application development strategies, hands-on exercises and explicit examples of TSO REXX features, considerations and issues.	3 Days	\$4,350
JCL.100	MVS JCL Students will learn to write and modify sophisticated JCL Streams and PROCs, using advanced MVS features and utility programs.	5 Days	\$7,250

IMS

IMSDC.100	IMSDC.100 The purpose of this course is to train the participant in designing, creating and maintaining an IMS DC online application program using MFS. Emphasis is on program coding, debugging and application program efficiency. The course features extensive hands-on workshops and exercises and gives thorough and comprehensive coverage to MFS and IMS DC application coding techniques.	5 Days	\$7,250
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Prices subject to change without notice
Revised: 3/9/92

To Order Call: 1 (203) 633-0359

Course Code	Course Description	Duration	Price
CICS/VS			
CICS.100MC	CICS/VS Concepts This course is designed to provide a general overview and the groundwork for understanding the internal structure and facilities of CICS.	1 Day	\$1,500
CICS.300H	CICS/VS Command Level Application Programming This course is designed to present the CICS/VS efficiency features, present the importance of proper application design, and describe the syntax and usage of CICS commands.	5 Days	\$7,250
CICS.400MC	CICS/VS Command Level Advanced Application Programming Students will become more familiar with CICS commands. They will be exposed to more advanced commands to assist in application processing. They will begin to develop an understanding of how to structure CICS programs for greater efficiency.	5 Days	\$7,250

Other Courses

PCWIN.100	Microsoft Windows 3.0 Courses The student will learn to start Windows and use it to enter and use standard business applications. This course is intended for personnel who will be using Windows Applications in their daily work.	1 Day	\$1,600
ORA.100	ORACLE Concepts and Facilities This seminar is designed to introduce the participants to the ORACLE Relational Database Management System and the SQL programming language. Emphasis is placed on what the product is, what it can do, and what it can do well.	1 Day	\$1,900
ORA.200	ORACLE SQL*Plus This course is designed to introduce the participants to the ORACLE version of the SQL programming language. The course features extensive hands-on workshops and exercises, and gives a thorough and comprehensive coverage of the SQL*Plus programming language.	3 Days	\$5,400
ORA.300	ORACLE SQL*Forms This course is designed to introduce the participants to the SQL*Forms Application Development Package. The course features extensive hands-on workshops and exercises and gives a comprehensive coverage of SQL*Forms and the critical design issues necessary to implement a successful SQL*Forms Application.	3 Days	\$5,400
ORA.550	ORACLE Logical Database Design This course exposes Analysts and Database Designers to the disciplines and techniques of current ORACLE conceptual and logical database design methods.	2 Days	\$3,600
SAS.100	SAS Fundamentals The student will learn the fundamentals of SAS programming. The primary tools for manipulating and printing data are covered in a hands-on environment.	3 Days	\$5,100
SAS.300	SAS Programming The student will learn advanced SAS programming and SAS efficiency considerations. Techniques for maximizing SAS' capacity will be covered.	2 Days	\$3,400
STRU.100	Structured Analysis and Design A presentation of classical methods of structured analysis and design techniques, supplemented with information about implementation through automated (CASE) tools.	5 Days	\$9,750

Instructors

Our instructors are consultant specialists (*many are published authors*) in fields related to the courses they teach.

Courseware

Our courseware is current and geared for real-world programming situations and production work. All of the program examples in the handouts, workshops, and exercises are coded using structured techniques in a maintainable, easily-modified style. This coding approach produces quality application code that is easily understood, tested/verified, and maintained.

Commitment

Our commitment is to excellence in education. In essence, this is our philosophy and commitment to you.